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## Formal Conditions that Affect Agricultural Credit Supply to Small-scale Farmers in Rural Kenya: Case Study for Kiambu County

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### Abstract

Credit is an important factor in agricultural production especially to small holder agriculture. This study was to establish the effect of formal lending conditions that affect the supply of agricultural credit to farmers such as interest rates and collateral requirements. The study adopted a descriptive research design and target population was the Credit managers and loan officers in four Kenya Commercial Bank (KCB), Equity bank, Family bank and Cooperative bank banks in Gatundu South. The study used a simple regression model to establish that the credit agricultural credit access is still affected by the aforementioned conditions. From the study, policy recommendations were public education on the effects of interest rates. Banks should come up with products that suits small scale farmers' needs such as group lending, affordable mode of payment that will attract farmers to borrow agricultural credit.

**Keywords:** agricultural credit; collateral; interest rates; banks; smallholder

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## **1. Introduction**

Agriculture in Kenya can be the largest source of investment in Kenya since most people depend on agriculture either directly or indirectly. According to Christen and Anderson [1], small scale farmers are less organized and their findings suggested that there are smallholders who are non-commercial, commercial smallholders with loose value chain and smallholders with tight value chain. Banks and other microfinance institutions have not been able to lend due to the small sizes of the land and the unusable collateral to fulfill credit lending requirements [1]. There still remains a weak cooperative system to mobilize financial resources. This study was to establish the effect of formal lending requirements that affect the supply of agricultural credit to farmers.

### ***1.1. Literature Survey***

Credit is one of the major drivers of agricultural production especially to small holder agriculture. For credit to be offered, the borrower needs to give a form of obligation. Inaccessibility to credit by small holders especially women has resulted in limited operations and technological input [2]. Most of the world's farmers are small scale and one of the noted obstacles they face is lack of credit [3]. For many years small scale farmers have had limited access to agricultural credit from financial institutions since they did not meet the criteria for borrowing [4]. Agriculture has been the dominant source of livelihood in Africa especially in low-income rural areas [5] which has in the past received low investments. Regionally, a study carried out indicated that lack of capital and access to affordable credit has led to low agricultural activity [6] printing.

According to a report by [7] which indicated that governments can help since smallholders have constraints to financial services, access to markets, vulnerability to shocks and limited ability to mitigate risks. Small scale farmers have been in the past overlooked due to the cost of processing and servicing small unsecured loans. Rural households depend on informal credit to purchase farm inputs. The argument behind the informal credit lending is that it could have been led by government's regulation on formal sector. Although there have been institutions such as Small and Medium Enterprises, Microfinance Institutions set up in the rural areas where small-scale farmers are, actual investment in the agricultural sector has been relatively small [2].

Credit risk has been and still is the major challenge which banks face emanates from borrowers who do not repay their loan. It is for this reason that banks do require collateral before advancing credit. The small scale farmers however continue to face challenges like access to credit to enhance farming technics and access to facilities that would require financial backing. The declining trends for supply of agricultural credit to farmers pose food insecurity risks. Farmers face unconducive environment and weak incentives to invest in agriculture. A key constraint that small-scale farmers face is adequate supply of agricultural credit due to various factors such as market related or institutional factors [7].

The agricultural sector has in the recent past faced numerous challenges especially in funding. According to International Fund for Agricultural Development [8], low investments in agricultural sector is more evident in Kenya especially to smallholders yet it is an important source of boost to the agricultural sector. Lack of working capital to enhance productivity has led to low output amongst small holders. In 1990 commercial banks closed down rural branches to cut costs and improve profits [9]. With this kind of situation, traditional financial institutions such as savings and credit cooperatives (SACCOs) emerged to lend those who could not reach the threshold of bank requirements. In addition, most farmers resulted to borrowing from friends or relatives and promised to payback immediately their produce generated profit is bought at the market. Agricultural trade in Kenya especially by small holders is lacking and producer organizations are either weak or non-existent.

Access to credit by small-scale farmers is still a challenge despite Kenya having a relatively well developed banking system [2]. In Kenya, Small scale farming provides the larger population living under the poverty line with subsistent source of food. Despite the large number of banks, there exists limited competition among them which causes the lending interests rates to remain high. In the recent past, the number of SACCOs has also increased yet the level of agricultural credit supply to small scale farmers is still low.

## **1.2. Empirical Review**

### ***1.2.1 Collateral for accessing Agricultural Credit***

All small-scale entrepreneurs face problems in providing loan collateral to financial institutions. Either they have few assets, or these are in a form that is not liquid and hence not acceptable as loan security as noted by authors of [13]. According to World Bank the number one reason why individuals do not apply for or are denied loans is insufficient collateral, which is the result of both an inefficient registration system for moveable assets and the lack of adequate documentation for ownership claims. Formal credit remains inaccessible to most households because many Africans hold their assets (such as livestock, commodity stocks or property) without proof of Ownership (title deeds). As a result, they struggle to provide collateral to financial institutions. Although a recent study conducted by author [14] suggested that there has been an emergence of Grameen type Micro-Credit Institutions that lend through groups to overcome collateral problems, access to agricultural credit from formal financial institutions such as banks and MFIs is still low. This is due to lack of collateral by small scale farmers according to author [11].

### ***1.2.2 Interest rates on Credit***

The authors of [15] cited [12] who found that credit rationing by financial institutions using interest rates has locked out most poor individuals. However, a study carried out by a indicated that MFI like Pamoja authors of [16] Women Development Programme (PAWDEP) located in Kiambu County charge very low interest rate to borrowers. Authors of [17] showed that banks with a close relationship

to borrowers can offer relatively low interest rates at the beginning of the relationship purposely avoiding adverse selection and moral hazard. Imposing ceilings on interest rates that can be charged limit the extent of lending from formal credit markets to the poor because the poor are typically riskier and lending to them is not profitable at rates below the ceiling.

## **2. Data collection and Regression Model**

The study adopted a descriptive research design since the study is intended to gather quantitative and qualitative data to find out how formal conditions affect the supply of agricultural credit to small scale farmers in Kiambu County.

Primary data was gathered using semi-structured questionnaires where the respondents were issued with the questionnaires. According to Mugenda and Mugenda [10] descriptive research was used to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a situation. The target population was the Credit managers and loan officers in the four selected; Kenya Commercial Bank (KCB), Equity bank, family bank and Cooperative bank banks in Gatundu South.

**Table1:** Target Population

<b>Category</b>	<b>Target Population</b>	<b>Percentage</b>
Credit Managers	16	22
Loans officers	56	78
<b>Total</b>	<b>72</b>	<b>100</b>

Source: (Bankers Association of Kenya, 2013)

The study used descriptive research design; 50% of the 72 respondents were used in this study. In this study 50% of a population of 72 staff gave a sample size of 36 respondents which was statistically significant for this study.

An analytical model of a linear multiple regression equation of the form shown below was developed as:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e_1 \quad (1)$$

Where by: Y= Agricultural credit;  $\alpha$  = Autonomous factors;  $X_1$ =Collateral requirement;  $X_2$ =Interest rates;  $\beta_1$  = Coefficient for Collateral requirement;  $\beta_2$  = Coefficient for Interest rates;  $e$ = Error term - Captures all relevant variables not included in the model because they are not observed in the data set.

## 2.1 Regression Model

**Table 2:** Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.161	.129		1.24	.000
	Lending Interest Rates	-3.282	.064	.093	-51.28	.029
	Collateral Requirement	-1.218	.040	.030	-30.45	.041

$$Y = 0.161 - 3.282 X_1 - 1.218 X_2 \quad (2)$$

From the regression model in table 2, holding lending interest rates and collateral requirement to a constant zero, credit access by farmers would be 0.161, its established that a unit increase in lending interest rates would cause a decrease in access of credit by farmers by a factor of 3.282, also a unit increase in collateral requirement would cause a decrease in access of credit by farmers by a factor of 1.218. The study further revealed that the P-value were less than 0.05 in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study.

## 3. Results from the Study

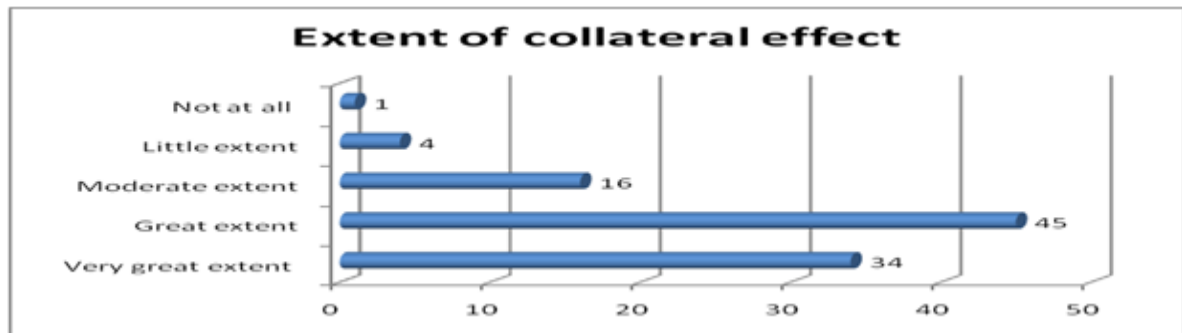
The questionnaire return rate was 83% for the banks. Mugenda [10] states that a 50% response rate is adequate, 60% is good and above 70% is rated very well.

### 3.1. Collateral requirement effects on credit

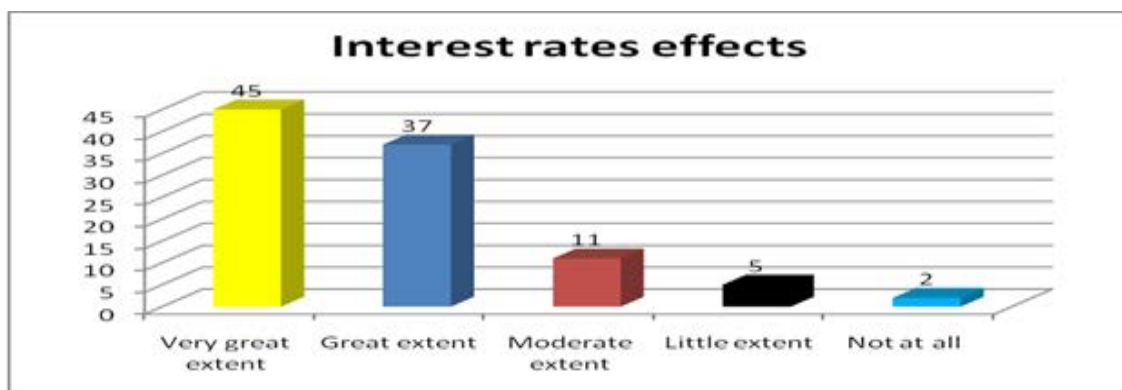
That collateral requirement affects the access of credit by small scale farmers from the bank to a greater extent as shown by 45% response rate as shown by figure 1. This shows that if farmers do not have the right collateral, chances of credit access is slim. In most cases the collaterals can be in form of guarantors, properties, pay slip from the local agricultural factories and cooperatives among others.

### 3.1. Interest Rates

Majority of the respondents felt that interests affected credit access to a very great extent and this represented by a 45% response level as show by figure 2. This indicates that the farmers consider the interest rates that will be charged. The respondents felt that their clients show some concern on the interest rates charged.



**Figure 1: Collateral Requirements**



**Figure 2: Interest rates**

#### **4. Conclusion**

The study was consistent with other studies that established that most banks still request for collateral from the farmers as found out earlier by Kihimbo [11]. The study concurs with a study carried out by Stiglitz and Weiss [12] who found that credit rationing locks out poor individuals. Financial institutions charge high interest rate due to risk involved in case of defaults.

Financial institutions in the rural areas will find this study necessary in their policy formulation in that for them to become competitive, it will be important to tailor make products that suit small scale farmers and overcome the problem of collateral which hinders supply of credit to a large extent. The study also recommends that financial institutions should have an education campaigns with the clients on their credit policies and even the prevailing credit terms. This will encourage clients to apply or renegotiate the terms of their previous loans as the case may be and reduce cases of uncertainty with regards to credit supply policies.

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## **References**

- [1] Africa, A. f. “*Africa Agriculture status report*”. AGRA: Nairobi. 2013
- [2] Alila, P. O. and Atieno, R. “Agricultural Policy in Kenya: Issues and process”. *Future Agricultures*. Nairobi, 8-9. 2006
- [3] Wales, M. “Investment in Agriculture and Rural Development”. *EASYPol; FAO Policy Learning Programme*. 2008
- [4] Diagne, A. and Zeller, M. “Access to Credit and Its Impact on Welfare in Malawi”. *International Food Policy Research Institute*, 116, 62-66. 2001
- [5] Faye, I. and Thouraya, T. “Financial Inclusion in Africa”. *African Development Bank*. 2013
- [6] Salami, A., Abdul, B. and Zuzan, B. “Smallholder Agriculture in East Africa: Trends, Constraints and Opportunities”. *African Development Bank*. 2010
- [7] FAO. “The State of Food and Agriculture”. *FAO*, 12. 2012
- [8] IFAD. “Agricultural Marketing Companies as Sources of Smallholder Credit in Eastern and Southern Africa. Eastern and Southern Africa Division”. 2003
- [9] Betty Kibaara, J. A. “*Trends in Kenyan Agricultural Productivity: 1997-2007*”. Nairobi: Tegemeo Institute of Agricultural Policy and Development. 2008
- [10] Mugenda, O. M. and Mugenda, A. G. “*Research Methods: Quantitative and Qualitative Approaches*”. Nairobi: Acts Press. 1999
- [11] Kihimbo B. W., Ayako, B.A. and Omoka, K. W. “Collateral Requirements for Financing of Small and Medium Enterprises (SMEs) In Kakamega Municipality, Kenya”. *International Journal of Current Research* 4(6), 21-26. 2012.
- [12] Stiglitz and Weiss. “Credit Rationing in Markets with Imperfect Information”. *The American Economic Review*. 71(3), 393-410. 1981
- [13] Jessop, Diallo, Duursma et al. “Creating Access to Agricultural Finance Based on a horizontal study of Cambodia, Mali, Senegal, Tanzania, Thailand and Tunisia” *The A Savoir* 14,23-24. 2012.

- [14] Owuor G. "Is Micro-Finance Achieving Its Goal Among Smallholder Farmers in Africa? Empirical Evidence from Kenya Using Propensity Score Matching". *Journal of Research in Agricultural and Applied Economics*. <http://purl.umn.edu/51470>, 2-3. 2009
- [15] Mwangi, I. and Sichei, M. "Determinants of Access to Credit by Individuals in Kenya: A Comparative Analysis of the Kenya National FinAccess Surveys of 2006 and 2009" *European Journal of Business and Management* 3,207.2009
- [16] Bichanga, W.and Njage, M. "Effects of micro finance institutions on poverty reduction in Kenya" *International Journal of Current Research and Academic Review* 2, 76-95. 2014.
- [17] Petersen and Rajan. "The Effect of Credit Market Competition on Lending Relationships" *The Quarterly Journal of Economics* 110 (2), 407-443. 1995.